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EXAMINER EUSTAQUIO, CAL J				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

Office Action Summary**Application No.**

10/567,775

Applicant(s)

RAIMBAULT, PIERRE

Examiner

CAL EUSTAQUIO

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/23/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/23/2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Claim Rejections-35 U.S.C. 102

1. The following is a quotation of 35 U.S.C. 102(e) which forms the basis for all obviousness rejections set forth in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. **Claims 11-14, 16, and 17** are rejected under 35 U.S.C. 102(e) as being unpatentable over Balch et al., U.S. 2005/0162276.

(1) **As to claim 11**, Balch discloses the claimed: Base-station for interrogating electronic tags, that comprises at least one reader ([0029] controller 110) adapted to transmit a series of requests to said electronic tags by means of at least one antenna made up of a coil of conducting wires, each coil encompassing at least two parts around which current circulates, in the coil, in two opposite directions ([0035] and FIG. 2A discloses a "figure 8" phase cancelling antenna).

- (2) **As to claim 12**, Balch discloses the claimed: Base-station according to **claim 11**, wherein at least one of said coil has a symmetrical form. See rejection of **claim 11**.
- (3) **As to claim 13**, Balch discloses the claimed: Base-station according to **claim 11**, wherein the coil of at least one antenna extends over a rectangular shape and passes noticeably through the middle of said rectangular shape so as to separate two of said parts. See rejection of **claim 11**.
- (4) **As to claim 14**, Balch discloses the claimed: Base-station according to claim 13, wherein said coil passes through the middle of said rectangle parallel to one side of said rectangular shape so as to separate two of said parts having rectangular shapes of identical dimensions. See rejection of **claim 11**.
- (5) **As to claim 16**, Balch discloses the claimed: Base-station according to **claim 11**, wherein the coil of at least one antenna extends over a rectangular shape and passes two times across said rectangle so as to separate three of said parts around which the current circulates, in the coil, alternately, in opposite directions. Balch, FIGS 6A and 6B, and [0053] discloses the above described antenna.
- (6) **As to claim 17**, Balch discloses the claimed: Base-station according to **claim 16**, wherein one of said three parts has a rectangular shape and presents a surface that is noticeably equal to an half of the surface of said antenna and is surrounded by two of said parts, each of said two parts having a rectangular shape and presenting a surface that is noticeably equal to a quarter of the surface of said antenna. See rejection of **claim 16**.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
2. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. **Claims 15 and 18** are rejected under 35 U.S.C. 102(b) as being unpatentable over Balch et al., U.S. 2005/0162276 in view of Taniguchi et al. U.S. 8,342,548.

- (1) **As to claim 15**, Balch discloses except for the claimed: Base-station according to **claim 13**, wherein said coil passes through the middle of said rectangle along a diagonal of said rectangle so as to separate two of said parts having triangular shapes of identical dimensions. Balch, as previously disclosed, describes a "figure 8" type antenna that utilizes a rectangular shaped configuration. Balch does not disclose an antenna configuration that includes a "coil passes through the

middle of said rectangle along a diagonal of said rectangle so as to separate two of said parts having triangular shapes of identical dimensions." In the same art of tagged systems, Taniguchi, FIG. 11C, discloses a "figure 8" type of antenna that is substantially triangular in shape. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch the antenna disclose in Taniguchi to produce an tag identification system that utilizes antenna coils as disclosed in Taniguchi. Such an antenna configuration is not new in the art and represent an alternative embodiment of tag detection, as disclosed in Taniguchi, and one of ordinary skill in the art would have found it obvious to produce the above combination as claimed with a likelihood of success.

- (2) **As to claim 18**, Balch discloses except for the claimed: Base-station according to **claim 11**, wherein information transmitted between a base-station and a tag is sent in amplitude modulation of a magnetic field generated by the coil. As to the above limitations, Balch does not disclose limitations regarding modulation off a magnetic field generated by the coil. In the same art of tagged systems, Taniguchi, col 6, lines 38-43, discloses using amplitude modulation as a means of communicating between a tag and a reader. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch the use of AM as a modulation technique for communications between a reader and a tag. Amplitude modulation is well known in the art and one of ordinary skill in the art would have known/recognized such a scheme and would have

incorporated such a modulation system into the above combination with a likelihood of success.

4. **Claims 19** is rejected under 35 U.S.C. 103(c) as being obvious over Balch et al., U.S. 2005/0162276 in view of Seal, U.S. 6,661,335.

(1) **As to claim 19**, Balch discloses except for the claimed: Base-station according to **claim 11** that comprises at least one antenna associated to each of three axes perpendicular to each other, the reader being adapted to repeat a sequence of requests successively with different antennas. While Balch, as previously disclosed in the rejection of **claim 1**, using figure 8 antennas to provide a means to communicate with a tag, Balch does not disclose providing an array of antennas in this configuration in which each antenna is associated with three axes perpendicular to each other. In the same art of tag identification systems, Seal, col. 9, lines 35-56, discloses providing a similar set of antennas in a three dimensional orthogonal configuration. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch the three dimensional antenna array disclosed in Seal to provide a tag identification that includes the ability to have the reader transmit to different antennas shown in the above mentioned configuration. Such a system as disclosed in Seal is not new in the art and would help to aid the reader in detecting a tag that includes at least one of the antennas meeting the polarization of the tag's own antenna (for better communications). Furthermore, although the reference doesn't specifically disclose transmitting the interrogation signal in a sequential

manner, it would have been obvious to do so since it would aid the interrogator in scanning for tags meeting the entire antenna configurations found in the combine antenna scheme disclosed above in Seal.

5. **Claims 25 and 26** are rejected under 35 U.S.C. 103(c) as being obvious over Balch et al., U.S. 2005/0162276 in view of Cole, U.S. 6,144,299.

- (1) **As to claim 25**, Balch discloses except for the claimed: Base-station according to **claim 11** that comprises two symmetrical panels comprising similar antennas. As previously disclosed above in the rejection of **claim 1**, Balch, [0035] and FIG. 2A discloses a "figure 8" phase cancelling antenna. However Balch doesn't disclose this in the fashion described in the above limitations. In the same art of electronic labeling technology, Cole, FIG. 13 and col 10, lines 51-67 and col. 11, lines 1-11, discloses a pair of antennas used to detect tagged labeled objects passing through a direction indicated in arrow A. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch the dual antenna passage system disclosed in Cole to produce a reader tag system that utilizes a dual antenna system. Such systems are not new in the art and represent an alternative embodiment of tag detection, as disclosed in Cole, and one of ordinary skill in the art would have found it obvious to produce the above combination as claimed with a likelihood of success.
- (2) **As to claim 26**, the combination of Balch and Cole discloses the claimed: Base-station according to **claim 11**, wherein the reader is adapted to receive responses from said electronic tags on each antenna. See the rejection of **claim 25**.

6. **Claim 20** is rejected under 35 U.S.C. 103(c) as being obvious over Balch et al., U.S. 2005/0162276 in view of Seal, U.S. 6,661,335 and Beigel et al. U.S. 2003/0102960.

- (1) **As to claim 20**, Balch discloses except for the claimed: Base-station according to **claim 19**, wherein said sequence of requests is limited just to a binary datum stored by the electronic tags. As to the above, Balch doesn't disclose these limitations. In the same art of tag identification systems, Beigel, [0041], discloses a tag receiving information from a reader, demodulating the information, and sending this binary information to a processor. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch the binary data memory scheme disclosed in Beigel to produce a tag identification system in which the tag stores numbers using binary data communicated by the interrogator. Such storage schemes are well known in the art and one of ordinary skill in the art would have known/recognized the practice of storing data in binary configuration in a tag and would have incorporated this known feature with a probability of success into the combination above as claimed in the invention.

7. **Claims 21 - 24** are rejected under 35 U.S.C. 103(c) as being obvious over Balch et al., U.S. 2005/0162276 in view of Seal, U.S. 6,661,335 and Beigel et al., U.S. 2003/0102960 and Mercer et al. U.S. 2005/0099298.

- (1) **As to claim 21**, Balch, Seal, and Beigel discloses except for the claimed: Base-station according to **claim 20**, wherein the reader is adapted to determine a value of the binary datum according to a time interval during which an electronic tag

responds. Beigel, as previously disclosed, describes a tag receiving and storing tag information in binary configuration. Beigel doesn't disclose a reader determining the value of data received from a tag. In the same art of electronic identification systems, Mercer, [0008], discloses an interrogator interrogating specific RFID tags containing a selected value. The interrogator/reader, upon determining the tag contains a specific value, proceeds to obtain identification information from the tag. Furthermore, Mercer, [0004], also discloses a situation where once tags have communicated using a pre-defined protocol, the RFID interrogates the tags to obtain identifying information from the tags. It would have been obvious for one of ordinary skill in the art at the time of the claimed invention to include into Balch, Seal, and Beigel the electronic reading system disclosed in Mercer to produce the claimed limitations. As disclosed previously, the use of binary data as a means for communications between readers and tags is not new in the art and one of ordinary skill would have known/recognized that the use of binary communication schemes are known and would have therefore incorporated binary communications into the above combination with a likelihood of success.

- (2) **As to claim 22**, Balch, Seal, and Beigel discloses except for the claimed: Base-station according to **claim 20**, wherein, if said binary datum is a pre-defined value, the reader discontinues the sequence of requests and reads an identifier of the electronic tag. As disclosed in the rejection of **claim 19**, the Balch, Seal, and Beigel discloses the reader sending a set of request to each of the antennas found

in the three dimensional antenna configuration disclosed above. However, neither discloses discontinuing a sequence of requests and reading an identifier of an electronic tag if the binary datum contained in the tag is a predefined value. In the same art of RFID secured tagged systems, Mercer, [0008], discloses an interrogator interrogating specific RFID tags containing a selected value. Furthermore, Mercer, [0004], also discloses a situation where once tags have communicated using a pre-defined protocol, the RFID interrogates the tags to obtain identifying information from the tags. If the communication indicates that the removal of an article has not been authorized, the RFID system initiates a security action. The detection of a tag transmitted a selected value is performed before the tag submits identifying indicia. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the binary number based system disclosed in Balch, Seal, and Beigel the RFID security system disclosed in Mercer to produce an RFID security system that determines if a predetermined binary data is stored in a set of tags and upon the reader determining that certain tags contain this predetermined data, the reader further determines the identifying information from one or more tags and initiates a security action if the information determines that the tagged item is not authorized for removal. Identifying a tag containing certain data before committing the communications between the reader and the tag to an identification procedure increases the efficiency of the system by having the

reader only identify relevant tags which reduces data collisions and bandwidth usage.

- (3) **As to claim 23**, Balch, Seal, and Beigel discloses except for the claimed: Base-station according to **claim 22**, wherein said pre-defined value represents the absence of passage close to another base-station. Balch, Seal, and Beigel discloses a reader sending a set of requests to a set of RFID tags but none of the above discloses a scenario in which a tag contains a pre-defined value indicating that the tag hasn't passed proximate to another reader/base station. In the same art of RFID secured systems, Mercer, [0028-29], discloses an RFID tag system in which there are RFID reader/writers included within a protected area as well as at the exit. If a tagged item has not received authorization from a reader/writer electronically giving authorization to the tag that it can be removed from the protected area, if subsequent communications with an exit control reader that indicates the removal of the tagged article has not been authorized, the RFID system initiates a security action. Effectively, tagged items not having such authorization to leave a security area can be construed be tags possessing a pre-defined value which represents the absence of passage close to another base-station, that is, the base station or reader not giving authorization to the tag. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch, Seal, and Beigel the security tagged system disclosed in Mercer to produce an RFID security system including the claimed limitations. Such systems are not new in the art, as disclosed in Mercer,

and one of ordinary skill would have had a likelihood of success in producing the claimed invention using these known techniques.

- (4) **As to claim 24**, the combination of Balch, Seal, Beigel, and Mercer discloses the claimed: Base-station according to **claim 22**, wherein said pre-defined value is, chronologically, represented in the first time for signal emission by an electronic tag. See rejection of **claim 22**.

8. **Claims 27** are rejected under 35 U.S.C. 103(c) as being obvious over Balch et al., U.S. 2005/0162276 in view of Cole, U.S. 6,144,299 and Watkins, U.S. 6,317,027.

- (1) **As to claim 27**, Balch discloses except for the claimed: Base-station according to **claim 26**, wherein the reader is adapted to detect attenuation, during a pre-defined length of time, of one cycle out of two, said attenuation being performed by an electronic tag. Balch, while disclosing communicating with an electronic tag, doesn't disclose the reader detecting attenuation being performed by an electronic tag. In the same art of tag performance measurement systems, Watkins, col 4, lines 40-59, col. 5, lines 16-38, and col 5, lines 61-67 and col 6, lines 1-21, discloses a reader that determines if, as a result of the electronic tag being off frequency, attenuates the interrogated signal until the tag is brought close to the reader antenna before the RF field strength actuates the tag. The tag, by being off frequency, attenuates the interrogation signal from the reader. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Balch and Cole the tag performance measuring and correcting scheme of Watkins to produce a system that include the capability of determining

out of spec tags. Such a system would allow a user to replace, repair, or maintain the tags so the system can operate more efficiently.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Lowe et al., U.S. 5,874,896, which discloses an electronic anti-shoplifting system. The relevant passages include the Abstract, which discloses an electronic anti-shoplifting system monitors articles of merchandise in a sales outlet to deter shoplifting. The system is provided with transponder tags connected to the articles of merchandise. A tag exciter is positioned at an exit leading from the sales outlet and generates an RF surveillance excitation signal. If a customer carries an article through the exit without removal authorization due to failure to pay for the article, the transponder tag is activated, being powered by the RF surveillance excitation signal as the customer passes the tag exciter. The activated transponder tag generates an RF surveillance response signal that triggers an alarm. If the customer has removal authorization as the result of paying for the article, the transponder tag is reprogrammed to modify the operational data stored therein.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (571) 272-2963. The examiner can normally be reached on Mon -Thu 9:00Am-5:30Pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status

information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. E./

Examiner, Art Unit 2612

/BENJAMIN C. LEE/

Supervisory Patent Examiner, Art Unit 2612